

**REMARKS**

Reconsideration of the present application is respectfully requested for the reasons that follow.

**Rejections under 35 U.S.C. § 112, second paragraph**

Claims 1-43 are pending in the application. The Examiner has rejected claim 42 under 35 USC § 112, second paragraph, as being indefinite for inclusion of language reciting both a broad range (i.e., phosphorylated/sulfated biopolymers) and a narrow range (i.e., specifically, peptides/proteins) in the same claim. The Examiner also argues that “such as” wording renders a claim indefinite because it raises a question as to whether that feature is an example of the claim (in which case it is not required) or is a required feature of the claim. We have amended claim 42 to address the indefiniteness issue and so this rejection should be withdrawn.

**Rejections under 35 U.S.C. § 102(b)**

The Examiner has rejected claims 1, 2, 6-8, 9, 15 and 16 under 35 USC § 102(b) as being anticipated by Tanner et al. (U.S. Patent Application No. 2003/0003474). Tanner teaches a porous, inorganic substrate for attaching an array of biological or chemical molecules and a method of fabricating such substrates. In the last Office Action, the Examiner rejected claims 7 and 8 under 35 USC § 102(b) as being anticipated by Tanner. In that Office Action, the Examiner argued that Tanner discloses that the film thickness can be roughly 3  $\mu\text{m}$  as claimed in the instant invention, because

Tanner provides the film thickness of “at least about 5  $\mu\text{m}$ .” The Examiner reasoned that the qualifiers “roughly” and “about” indicate that the terms should be interpreted to allow a deviation of  $\pm 50\%$ . In response to the last Office Action, we argued that there is no case law that supports the Examiner’s assertion and we do not agree with the Examiner’s reasoning. The Examiner was not persuaded by this argument. Rather, the Examiner argues that the specification gives no direction as to how to construe the terms “roughly” and “about” and, therefore, he is entitled to give the terms a very broad construction.

There are several problems with this analysis. First, the element “roughly” in the instant invention and the term “about” in Tanner each have to be interpreted independently based on the content of their respective specifications. Assuming arguendo that “roughly” is construed to mean  $\pm 50\%$ , that does not mean that “about” is necessarily construed the same way. Furthermore, the claim language can be given its broadest reasonable construction in light of the specification. The Examiner has not explained how the instant specification supports a construction of  $\pm 50\%$  for “roughly,” nor has he explained how the Tanner specification supports a construction of  $\pm 50\%$  for “about.” In fact, the Examiner argues that the specification gives no guidance on how to interpret these terms. The Examiner’s term construction of  $\pm 50\%$  is entirely arbitrary and is not supported by case law or by the MPEP. Furthermore, we disagree with the Examiner’s argument that Tanner provides absolutely no guidance on how to interpret the term “at least about 5  $\mu\text{m}$ .” For instance, Tanner never discusses films that are thinner than 5  $\mu\text{m}$  and provides examples of films that are 10-12  $\mu\text{m}$  and 18-20  $\mu\text{m}$  (see Tanner, para. 59). Therefore, one of ordinary skill in the art, after reading Tanner, would

not interpret “at least about 5  $\mu\text{m}$ ” to mean 2.5  $\mu\text{m}$ . Finally, the Examiner argues that he can interpret the terms according to their broadest reasonable interpretation, but has not explained what the standard for “reasonable” is. Essentially, the Examiner has no basis for his term construction and he cannot simply make one up.

Second, assuming arguendo that the  $\pm 50\%$  analysis is correct for both terms, an overlapping range doesn't always anticipate a narrower range. If the prior art discloses a range which overlaps the claim range, but no specific examples within the claimed range are disclosed, then the subject matter must be disclosed with sufficient specificity to constitute anticipation (MPEP  $\S$  2131.03). This is a fact specific determination and the Examiner has to provide reasons for anticipation. In fact, Tanner does not provide any specific examples in the 1.5 - 4.5  $\mu\text{m}$  range and, hence, the Examiner would have to provide reasons why Tanner still supports a finding of anticipation. The Examiner has not done so.

For these reasons, we think that the Examiner has incorrectly made this anticipation rejection and it should be withdrawn.

**Rejections under 35 U.S.C.  $\S$  102(b) and 103(a)**

The Examiner has rejected all of the remaining claims as either being anticipated by Tanner or Barrow or being rendered obvious by Tanner or Barrow in light of various other references.

Regarding the rejections based on Tanner, in response to the last Office Action, Applicant amended the claims to require that the instant sample holder have only two layers (a substrate and a porous film) in order to distinguish it from Tanner which

Applicant argued has three layers (a substrate, a binding agent and a porous film). The Examiner rejected this argument and concluded that Tanner, in fact, has only two layers. Relying on Tanner para. 10, the Examiner argues that the binding agent is a sub-part of the substrate layer. Therefore, under the construction put forth by the Examiner, the instant substrate and the Tanner substrate are not analogous elements. The specification indicates that the instant substrate is only something that is a carrier to hold the inventive porous film. As such, the substrate in the instant claims is not able to bind an analyte. Rather, its binding capability is only provided by the porous metal oxide particles in the film. In Tanner, the binding agent is an “entity for attaching biological and chemical analytes” (see Tanner, para. 46). Since the Examiner is arguing that the Tanner binding agent is part of the substrate, it logically follows that the Tanner substrate must be suitable for attaching biological and chemical analytes. Therefore, one of skill in the art would know that the composition of a substrate for holding a film would be different from the composition of a substrate for attaching biological and chemical analytes, and therefore the Tanner substrate can be distinguished from the instant substrate.

In addition, regarding the obviousness rejections based on Tanner, it would not have been obvious to one of ordinary skill in the art to remove the binding agent of Tanner. Rather, the concept that the substrate of the instant invention would work properly without a binding agent is an unexpected result based on the content of the prior. The anticipation and obviousness rejections based on Tanner should, therefore, be withdrawn.

Regarding the rejections based on Barrow, in response to the last Office Action, Applicant argued that Barrow was not analogous to the instant claims because of differences in the properties of the ceramic films. The Examiner was not persuaded by these arguments. Applicant has amended claim 19, to distinguish the instant claims from Barrow, and therefore the rejections based on Barrow should be withdrawn.

In view of the foregoing, it is submitted that the present application is now in condition for allowance. Reconsideration and allowance of the pending claims are requested. The Director is authorized to charge any fees or credit any overpayment to Deposit Account No. 02-2135.

Respectfully submitted,

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